TPL VISION
Active LED solutions

ESSENTIAL EBAR+ OVERDRIVE
USER'S GUIDE

PREAMBLE

This notice includes all the advice and warnings that enables a correct set up and a safe use of the product. TPL Vision can not be responsible for the bad use of the notice. If so, TPL Vision cancels the guarantee's effects.

IP65 | +40°C -10°C | 24V ±10%

UNPACKING

Products are packed in our factory, using suitable materials for a safe transport through the usual means of transportation, in France and abroad. However, a damaged package must be reported to the carrier on delivery. Hand-written reservations must be indicated on the delivery order. Moreover, please send a letter or an email to TPL Vision as soon as possible (up to 24 hours after the delivery). If the transportation damage has not been stipulated on the delivery order and reported to TPL Vision in time, the package will not be taken back nor exchanged. To open the package, do not use any cutting blade so as to avoid damages on the product. Please use the delivered accessories, if needed (do not use any other products or equivalents to replace the delivered accessories).

RISK CLASS

The EN-62471 norm about lighting fluxes enables the classification of led lightings in 4 distinct groups, according to their hazardousness degree. Please find below an indicative table, recapitulating the classes of risk for our standard products.

Colour	Class	Risk
White WHI, Green 525 nm, Red 630 nm	0	none
UV 405 nm, Blue 470 nm, IR 850 nm	1	low
UV 365 nm	2	moderate
UV 385 nm	3	high

In all cases, TPL Vision recommends the use of **the protection glasses** that are listed in its catalog.

For more information about photo-biological risks, do not hesitate to contact us.

TPL Vision can provide calculation notes about **the nominal distance of eye risks** (security distance).

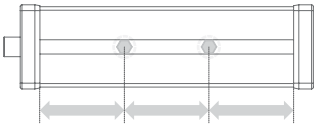
BEWARE to the infrared light, invisible to the eyes.
To know if the light is on, please refer to the LED indicators.

DIMENSIONS

	Length (mm)	Height (mm)	Width (mm)
	A	B	C
EBAR+ 125	158	45	47.6
EBAR+ 250	283	45	47.6
EBAR+ 375	408	45	47.6
EBAR+ 500	533	45	47.6
EBAR+ 625	658	45	47.6
EBAR+ 750	783	45	47.6
EBAR+ 875	908	45	47.6
EBAR+ 1000	1033	45	47.6
EBAR+ 1125	1158	45	47.6
EBAR+ 1250	1283	45	47.6

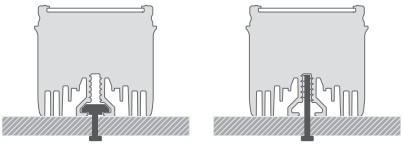
* Total length, without connector.

FIXING



SET AT EQUAL DISTANCE

- Length (Lg) < 600 mm : 2 M4 nuts
- 600 mm < Lg < 1250 mm : 3 M4 nuts



Nuts M4 – supplied

Screws M4 – not supplied

During the set up, the light has to be switched off and unplugged. Please use the delivered nuts and insert them in the groove located in the back of the light. The light will be better fixed if you spread the attachment points as indicated on the scheme above. You can also use M4 screws (not supplied) with a tightening torque from 0.5 to 1.5 Nm. We also recommend the use of a threadlocker (not supplied) to avoid any risk of loosening.

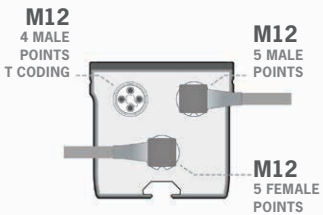
LED INDICATORS

ON : LED indicator **functioning mode**

Str. : LED indicator **Strobe ON**

IP65 +40°c -10°c 24V ±10%

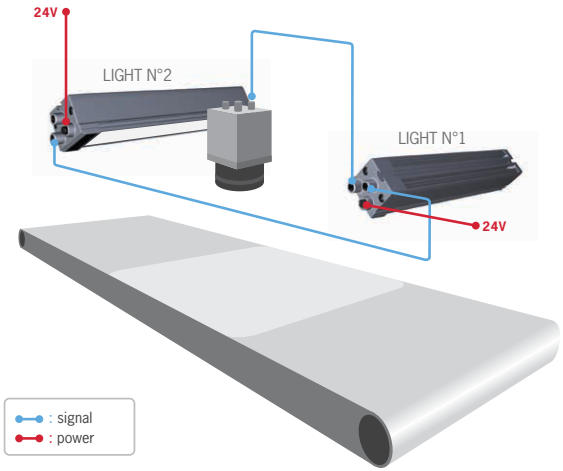
WIRING

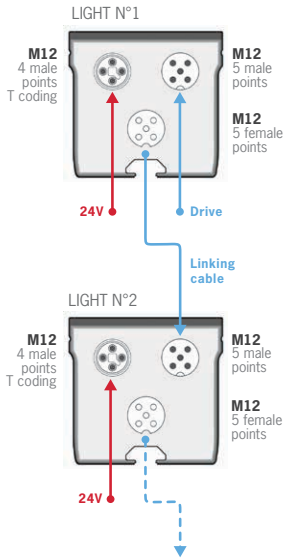


Front view

Top view

DAISY CHAIN

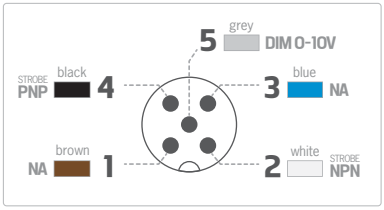


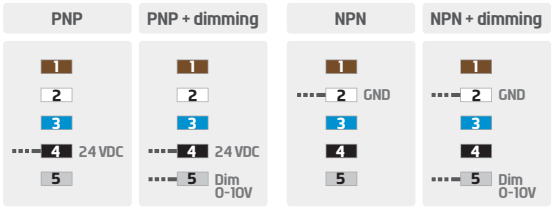


Use an extension cable male-female M12-M12 5 x 0,34²

CONNECTION

M12 Connector 5 male points - DRIVE

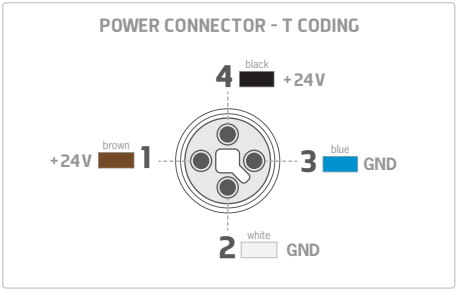


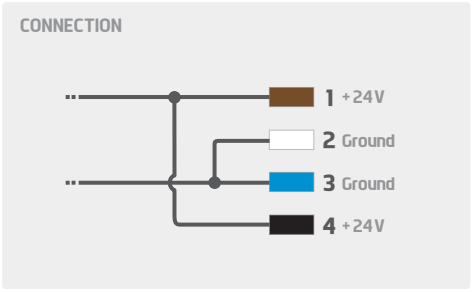


Light will be in continuous mode by leaving signal on strobe input active.

The **M12 male connector 5 points** is **COMPLIANT** with the M12 female connector 4 points.
In that case, the dimming option is not available.

M12 Connector 4 male points - POWER





VOLTAGE DROP

Dimensions	125	250	375	500	625	750	875	1000	1125	1250
Max voltage drop in the bar (V)	0.01	0.03	0.06	0.12	0.18	0.26	0.35	0.46	0.58	0.72
Power supply cable : 4x1,5² max length for acceptable voltage drop (m)*	>150	>150	>150	>150	138	112	94	80	68	59
Linking cable : 5x0,34² max length for acceptable voltage drop (m)	No restriction if each bar has its own power supply cable please contact us for other configuration									

* For longer power supply cable, increase the section of the copper wire.

STROBE MODE

The product is optimised for a lifespan >50kh in a 40°C atmosphere.
In strobe mode, the strobing time is directly equivalent to the time during which the strobe entry is activated.

STROBE PNP & NPN

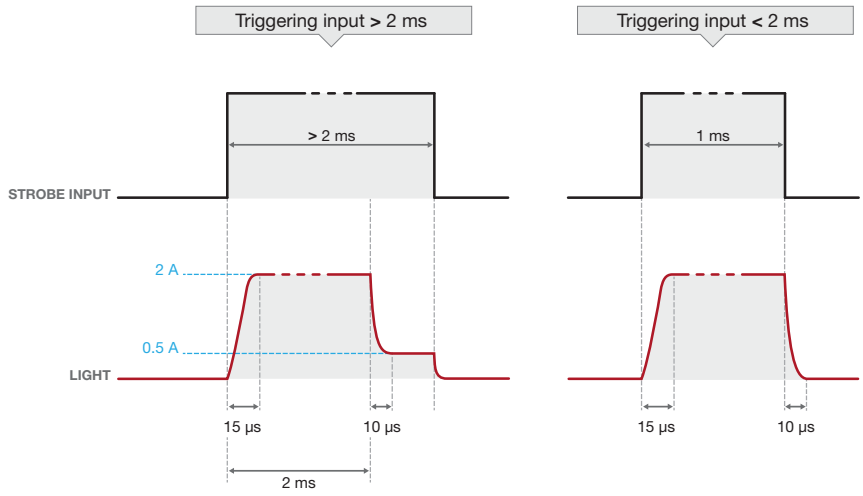
PNP : from 5 to 24V for 100% ON. From 0 to 1V for 100% OFF.
NPN : less than 1V for 100% ON. Above 2V for 100% OFF. Max 20V.

Strobe mode : LED are supplied with 2A.
Continuous mode : after 2ms at 2A , LED are supplied at 500 mA in continuous.

I (A)	D max (%)	t max
0,5	100%	CW
2	5%	1 ms

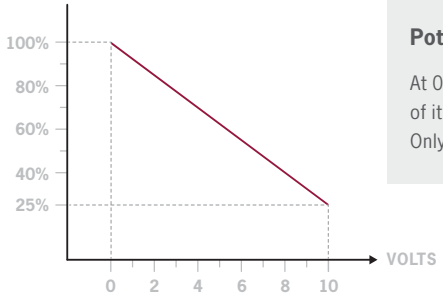
I : current through the LED
D : Duty Cycle
t : pulse duration

TIMETABLE



Continuous mode: in order to protect the light, after 2 ms, it decreases and reaches its power supply level in continuous mode (500 mA).

DIMMING 0-10V



Potential dimming between 0 & 10 V.

At 0 Volts, the product reaches 100% of its lighting power.
Only usable in the 2A phase.

POWER SUPPLY

	125	250	375	500	625	750	875	1000	1125	1250
Max. comsumption (W)	10,1	19,68	29,28	38,88	48,48	58,08	67,68	77,28	86,88	96,48
Min. functioning Voltage	20V in the light input									
Normal functioning Voltage	24V in the light input (±10%)									
Max. functioning Voltage	30V in the light input									
Max. consumption Strobe signal	5mA									

OPERATING CONDITIONS

-10° to +40°C / 80% of humidity without condensation.
No thermal shock (max temperature variation: 10°C in 24h).

EQUIPMENT MAINTENANCE

CLEANING (when the product is switched off)

Please use a soft and dry cloth.
Do not use any abrasive material.
Do not use any cleaning solvent or aggressive chemical product – isopropyl alcohol.

USER SECURITY

Do respect the power supply voltages and the connection terminals.
Do not modify or dismantle all or part of the product.
Do not connect or clean when power is on.
Do not watch the lighting source directly, and follow the advice below :

- If the workstation enables it, interpose a filter that will stop the lighting radiation under fixed or adjustable frame between the source and the operator.
- When these measures cannot be implemented, supply the operators with glasses (class 4) available for sale at TPL Vision, or with a dedicated protective mask, that will stop the lighting radiation.
- Forbid or limit the direct access to the lighting source (exposure into the radiation axis).
- Establish a security perimeter so as to prevent the operators from approaching the lighting source beyond the recommendations of the manufacturer, as for eye irritation is concerned.
- In any case, ensure that the chosen means properly reduce the exposition quantities (features of screens or glasses to be chosen, according to the wavelengths that the operators are exposed to).

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